E1

immunogenic peptide to be presented by MHC molecules on the target cell surface.

Please rewrite claim 21 as follows:

E2 subst

21. (Twice Amended) A method of modulating the immune response of a [human or animal subject] target cell, comprising administering to the [subject] target cell an effective amount of a polypeptide in accordance with claim 1 or 2.

REMARKS

In accordance with the above amendments, claims 1 and 21 have been amended; 1-3, 5-12 and 14-24 remain pending in the application. Claim 24 stands as have being withdrawn from consideration as being directed to a non-elected invention leaving claims 1-3, 5-12 and 14-23 as being presently under consideration in this application.

With respect to the rejections on the merits, it is noted that the Examiner maintains the position that the translocation portion is in inherit to the immunoglobulin (Ig) molecule disclosed in the '323 patent. It is believed that the addition of the language "from another source" to claim 1 clarifies a distinction not found in the reference and should clearly overcome this rejection.

Claim 21 has also been rewritten to replace the "human or animal subject" recited with a target cell. Claim 21 was the only claim that referred to the polypeptide as working in vivo. The amended claim, of course, does not contain this limitation.

In addition, in the parent application the Examiner has held the applicant accountable for failing to provide guidance as to how this same invention used in the same method of immunomodulation can provide a treatment for conditions requiring both immunostimulation and immunosuppression. To this applicant responds that, of course, the invention disclosed is no treatment for conditions requiring immunostimulation and immunosuppression at the same time. But the invention does disclose methods for treatment of conditions requiring immunostimulation (see examples 1, 2, 3, 4, 5, 7 & 8) and discloses guidance for the treatment of conditions which are in need for immunosuppression (see examples 6 and 9).

The Examiner has further rejected the claims over Casten, et al., in view of Fawell, et al., and Noguchi, et al., in the parent application. The Examiner argued that Casten, et al., teaches internalization and subsequent processing of the antibody conjugate. The Examiner has further

maintained the position that internalization and processing of the peptide antibody conjugate is taught at page 173, paragraph 2 of Casten, et al., (see paragraph 14 of Paper No. 19 dated June 13, 2000). The applicant questions this interpretation. That paragraph deals with the antigenicity of free peptide. There is no statement about internalization of the peptide antibody conjugate.

In contrast Casten, et al., teaches that "the T-cell antigen peptide THMcCys92-103, covalently coupled to antibodies specific for the B cell surface structures Ig, Ia and Class 1 are effectively presented to specific T cells by B cells as APC, and that such presentation does not require internalization or processing of the peptide antibody conjugate." (see Casten, et al., p. 177, last paragraph). On page 179, the penultimate sentence reads: "The results presented here indicate that a T-cell antigenic peptide, covalently coupled to a larger antibody molecule, can be readily recognized by an Ia-restricted helper T-cell in the absence of processing." Two sentences earlier it is stated that "the active peptide antibody conjugate is associated at the B cell surface." This means that no internalization occurred. In contrast to the view of the examiner we cannot find any indication that the peptide antibody conjugate may be internalized and/or processed.

Having this reference in mind, it is submitted that nobody skilled in the art would be led to introduce a sequence like the HIV tat sequence into a peptide antibody conjugate to facilitate the delivery of the immunogenic peptide into the cytosol (as taught by Fawell, et al.) because Casten, et al., teaches that this is not necessarily to elicit a T cell response.

Also the combination with the teaching of Noguchi, et al. (p53 as candidate for tumor recognition) would lead those skilled in the art only to the peptide antibody conjugate comprising the p53 sequence instead of the cytochrome c fragment described by Casten, et al.

In view of the above amendments taken together with the remarks herein applicant is of the opinion that the present claims are patentable over the art taken either singularly or in combination and early examination and allowance of the claims is respectfully requested. The Examiner is asked to please note the change in attorneys and firm name in the enclosed CPA request.

Respectfully submitted,

NIKOLAI, MERSEREAU & DIETZ, P.A.

C. G. Mersereau
Attorney for Applicants
Reg. # 26, 205

NOT MARKED-UP VERSION OF THE CLAIMS

1. A chimaeric polypeptide comprising:

(a) a binding portion comprising at least a portion of an immunoglobulin molecule having specific binding affinity for a eucaryotic target cell surface component;

(b) an effector portion consisting of at least one copy of an immunogenic peptide; and

(c) a signal from another source directing the immunogenic peptide to a particular cellular component, whereby binding of the chimaeric polypeptide to the cell surface component induces internalisation of at least the effector portion to allow the at least one copy of the immunogenic peptide to be presented by MHC molecules on the target cell surface.

21. A method of modulating the immune response of a target cell, comprising administering to the target cell an effective amount of a polypeptide in accordance with claim 1 or 2.